

OLLSCOIL NA hEIREANN, GAILLIMH  
THE NATIONAL UNIVERSITY OF IRELAND, GALWAY

SUMMER EXAMINATIONS 2001

**Master's Degree in Rural Development  
Second Year Examination**

**FOURTH PAPER (EC532)  
Techniques of Analysis II**

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**Time allowed: THREE hours.**

**FOUR questions to be answered. Use separate answer books for each question.**

**Choose one from each section and one more of your choice.**

Section I

1. (a) All in all, would you rather be in the third or fourth income decile?  
  
(b) Compare the virtues or otherwise of a box diagram and a histogram for comparisons of income distribution between regions.  
  
(c) What kind of data tends to end up in cross-tabulations. Give an example.  
  
(d) You have 200 observations on annual income per head in Co. Galway. The lowest observation is £7100, while the highest is £560,100. The first 9 deciles have a range from £7100 to £49780, and the interquartile range is £9710 to £18830, with the median at £13260. Describe how you might select bins for a histogram for the above.
2. (a) Can you think of an imaginary null hypothesis ( in words) that you might test and either reject or not reject using the Chi-Squared test for independence.  
  
(b) Should you use a t-test with ordinal data, yes or no? Can Mann-Whitney- and Wilcoxon's test be used with ordinal data?  
  
(c) If you saw Pearson's correlation coefficient  $r$  mentioned in a piece of research, what would you think is being measured? Any difference if it was Spearman's correlation?  
  
(d) The Kruskal Wallis test is designed to test what?  
  
(e) In general if you have numeric (ratio or interval) data, with large sample sizes, would you use parametric or non- parametric tests for testing equality of means? What type of test would you choose ( for testing equality of medians or means) in the opposite case of small sample sizes and/ or ordinal data/  
  
(f) In the F test, do the sample sizes from each population have to be the same? Can you state formally a typical null hypothesis associated with an F test?

## Section II

1. Good quantitative evaluations of economic development programmes require the use of comparable groups of unassisted communities or firms. Discuss.
2. Identify the evaluation issues that are likely to arise when assessing policies directed at generating new employment in disadvantaged regions.

## Section III

1. Thinking about a project or programme with which you are familiar, write an outline for an evaluation methodology for that project/programme detailing the rationale for the evaluation, the type of evaluation to be carried out, the specific methodologies to be used in the evaluation and the use to which the evaluation will be put.
2. "If you don't know where you are going then you can't know when you've got there." This quotation has been applied to the theory of evaluation. Make the case for carrying out evaluation to any project or programme with which you are familiar, or use the example of an evaluation that has been carried out, to illustrate the value of the observation quoted. In analysing the value of evaluation, discuss its possible limitations and aspects that hinder its objective utilisation as a policy tool.